Mayor Greg Iverson Elwood Town 5235 W. 8800 North Tremonton, UT 84337

Dear Mayor Iverson:

Attached is a copy of the *Draft* Community Transportation Plan (CTP) for Elwood Town. This CTP is a tool to help guide transportation decisions in your community, which will help meet the transportation visioning discussed during the public meetings held September 20th and 21st, 2005.

Many projects were developed during the public meetings, and local priorities established for several projects while developing the CTP. This project list will help the city develop an improvement program addressing your unique transportation issues. We are forwarding projects and comments for the state highway system, which are highway operations based, to the appropriate Utah Department of Transportation (UDOT) Regional Office so they may be addressed as priorities allow. In the meantime, UDOT will be using the list of projects identified for State Routes in our Long Range Planning Process. The Statewide Long Range Transportation Plan (LRP) identifies needs on the state highway system, from which projects are selected to be included in our Statewide Transportation Improvement Plan (STIP).

The next step in the Community Transportation Plan process is for Elwood Town to garner appropriate public involvement through your established public comment procedure. Then the CTP should be sent before the Elwood Town Commission for approval. It is important to restate that a CTP is a living document that changes as your County changes. We encourage you to revise the CTP as frequently as necessary to meet Elwood Town's needs.

Thank you again for allowing us to help you develop your Community Transportation Plan. We always value public input regarding the state highway system. Elwood Town has provided us valuable insight for our Statewide Long Range Planning Process.

Sincerely,

Kim Schvaneveldt, P.E. Engineer for Transportation Planning

Encl







Elwood Town Community Transportation Plan

September 2005

Prepared as a community involvement project by:

Elwood Town

Box Elder County

UDOT Planning Section

Elwood Town Community Transportation Plan

Mayor Greg Iverson

City Council Brad Frank

Steve Woerner Neil Anderson Ron Thompson

Town Clerk Tina Barker

Building Inspector Steve Bench

Table of Contents

1. Introduction

- 1.1. Background
- 1.2. Study Need
- 1.3. Study Purpose
- 1.4. Study Area
- 1.5. Study Process

2. Existing Conditions

- 2.1. Land Use
- 2.2. Environmental
- 2.3. Socio-Economic
- 2.4. Functional Street Classification
- 2.5. Bridges
- 2.6. Traffic Counts
- 2.7. Traffic Accidents
- 2.8. Bicycle and Pedestrian
 - 2.8.1. Biking/Trails
 - 2.8.2. Pedestrians
- 2.9. Public Transportation
- 2.10. Freight
- 2.11. Aviation Facilities and Operations
- 2.12. Revenue
 - 2.12.1. State Class B and C Program
 - 2.12.2. Federal Funds
 - 2.12.3. Local Funds
 - 2.12.4. Private Sources

3. Future Conditions

- 3.1. Land Use and Growth
 - 3.1.1. Population and Employment Forecasts
 - 3.1.2. Future Land Use
- 3.2. Traffic Forecast

Table of Contents

4. Transportation Improvement Projects

- 4.1. Current State Transportation Improvement Program (STIP)
- 4.2. Recommended Projects
- 4.3. Revenue Summary
 - 4.3.1. Federal and State Participation
 - 4.3.2. Town Participation
- 4.4. Other Potential Funding

5. (Appendix A) Planning Issues and Guidelines

- 5.1. Guidelines and Policies
 - 5.1.1. Access Management
 - 5.1.1.1. Definition
 - 5.1.1.2. Access Management Techniques
 - 5.1.1.3. Where to Use Access Management
 - 5.1.2. Context Sensitive Solutions
 - 5.1.3. Recommended Roadway Cross Sections
- 5.2. Bicycles and Pedestrians
 - 5.2.1. Bicycles/Trails
 - 5.2.2. Pedestrians
- 5.3. Enhancement Program
- 5.4. Transportation Corridor Preservation
 - 4.4.1. Definition
 - 4.4.2. Corridor Preservation Techniques
 - 5.4.1.1. Acquisition
 - 5.4.1.2. Exercise of Police Powers
 - 5.4.1.3. Voluntary Agreements and Governmental Inducements

6. Appendix B

- 6.1 Zoning map*
- 6.2 Suggested types of cross-sections

Figures, Charts & Tables

Figures

- F-1-1 Study area map
- F-1-2 Study vicinity map
- F-2-1 Functional classification map
- F-2-2 Bridge sufficiency map
- F-2-3 State roads crash rates map
- F-3-1 Average annual daily traffic yr 2004; yr 2030

Charts

- C-2-1 Population
- C-2-2 Decennial population change
- C-2-3 Population growth rate
- C-2-4 Employment growth rate
- C-2-5 Employment occupation sectors
- C-2-6 Annual average traffic
- C-2-6 Monthly ADT*
- C-2-7 Daily ADT*
- C-2-8 Hourly ADT*

Tables

- T-2-1 Bridge sufficiency ratings
- T-2-2 Average annual daily traffic
- T-2-3 Crash data
- T-5-1 Transportation needs & cost estimates

1. Introduction

1.1. Background

In about 1850, when the stagecoach went from Corinne, Utah to Montana, the road passed through a tract of land that was covered with an abundance of bunch grass that was favorable for grazing. Herds of Cattle and bands of sheep grazed there in the summertime. The first permanent settlement was made in 1868 when Mr. Davidsen and his family took up what was known as "Squatter Rights" on a tract of land on the bank of the Malad River. Other settlers came as homesteaders and began the task of building homes, farms and families.

In 1866, Anders Peter Andersen and his four brothers planted and harvested the first 20acre field of dry land grain in the State. From this humble beginning, the great dry land industry was developed in the West. The land underwent cultivation and sugar beets became a major crop. In 1918, a branch railroad was built from the U & I Sugar Factory in Garland to Elwood to transport the sugar beet harvest to the factory. In 1922-23, the Elwood Drainage District tilled a large portion of the land in the area and brought even more ground under cultivation. In 1889 a branch of the Church of Jesus Christ of Latter-Day Saints was organized. Stake President Lorenzo Snow ordained A. C. Hunsaker as the Presiding Elder. The branch was named "Fairview" after

President Snow remarked, "What a fair view you have here!" The Branch carried this name for eleven years.

Also in 1889, a post office for the settlement was applied for. At that time it was discovered that there was already a town in Utah named Fairview. The name Manila was suggested, but again, there was already a town named Manila in Utah. The US Mail Service suggested the name of Elwood. The name was accepted by the community, but it wasn't until 1898 that a post office was established at the home of Charles Kroksh. This was the first and only post office in Elwood.

In 1889-90, in a one-room log building on the property of A.C. Hunsaker, the first school convened. There were 13 students that first year. In 1891 a brick one-room school house was erected, and by 1917 it was expanded to 4 rooms.

In 1900 a Ward of the L.D.S. Church was established called the Manila Ward, however, in 1901 the name was changed to Elwood Ward so it would have the same name as the post office. P.M. Hansen was the first bishop. In 1904, an amusement hall was built by allotments contributed by the Saints and was used for religious services as well as for amusements. In 1930 a chapel and recreation hall were completed. The first Bell Telephone in the settlement

was in the store of N. A. Petersen in about 1902. In 1904-05, the Bear River Valley telephone service was brought from

Tremonton, and almost every home had this convenience. In 1921, the electric line was brought from Tremonton, and the settlers very much enjoyed this advantage. In the spring, summer, and fall the ground was cultivated, planted and harvested. In the winter, wagons and sleighs were used to harvest ducks and geese. Nothing was wasted—the meat was eaten, and the feathers made pillows and mattresses. Livestock was tended, cows milked, and eggs gathered each day. There was always much work to be done, but friends and neighbors gathered together often. The ladies "quilting bees" not only produced warm quilts, but also proved an enjoyable social occasion. Dances were held frequently in various homes. At first the music was furnished by K. H. Fridal on his violin, and later the Bear River City Brass Band was organized. It consisted of musicians from Bear River City and Elwood. Many of these musicians could play more than one instrument. If seven or eight couples participated, they felt they had a good crowd, and a good time was enjoyed by all.

Elwood has continued to grow and prosper.
Elwood is still home to many descendants of
the early settlers. Some of them live on the
same property their forefathers
homesteaded, and some live in the original
homes that have been renovated and
remodeled. Challenges have changed, but
the sense of community remains strong.

1.2. Study Need

Elwood Town has seen a 17.91% population increase within the last decade and a 19.54% population increase the decade before. From 1960 to 2000, the population has increased 196.5%. Population in the Green River area has gone through cyclical changes, but the overall trend shows very consistent trend in the population a well-established transportation plan is needed to provide direction for continual maintenance and improvements to Elwood Town's transportation system.

With the aging infrastructure of Elwood
Town transportation system and the need
for system improvements, a more extensive
transportation plan is necessary for Elwood
Town and the surrounding area.

Some of the major transportation issues around the State are as follows:

- Safety
- · Railroad crossings
- Trails (bicycle, pedestrian, & OHV)
- Signals
- City interchange aesthetics
- Connectivity of roadways
- Property access
- Truck traffic
- Alternate routes
- Speed limits

Elwood Town recognizes the importance of building and maintaining safe roadways, not only for the auto traffic but also for pedestrians and bicyclists.

1.3. Study Purpose

The purpose of this study is to assist in the development of a transportation master plan for Elwood Town. This plan could be adopted by Elwood Town as a companion document to the town's General Plan. With the transportation master plan in place the city can qualify for grants from the State Quality Growth Commission.



The primary objective of the study is to establish a solid transportation master plan to guide future developments and roadway expenditures. The plan includes two major components:

- Short-range action plan
- Long-range transportation plan

Short-range improvements focus on specific projects to improve deficiencies in the

existing transportation system. The longrange plan will identify those projects that require significant advance planning and funding to implement and are needed to accommodate future traffic demand within the study area.

1.4. Study Area

The study area includes Elwood Town, and land adjacent to it that is in Box Elder County. A general location map is shown in Figure 1-1. A more detailed map of the study area and city limits is shown in Figure 1-2. The study area was developed by Elwood Town and approved by the Elwood Town Transportation Master Plan Technical Advisory Committee.

The roadway network within the study area includes I-15, I-84, and SR-13. Each of these roadways provides a vital function to Elwood Town, to the rest of Box Elder County and to the State of Utah. I-15 connects all points north and south including Salt Lake City and the Utah/Idaho State Line. I-84 starts to head north in the area of Tremonton, I-84 connects Elwood Town and the Wasatch Front to Idaho. SR-13 is the main street running through Elwood Town, SR-13 connects Elwood Town to Tremonton and Garland in the north and to Brigham City in the south. These roadways along with the local road network are shown in Figure 2.

1.5. Study Process

The study, which began in September 2005, is proceeding as a cooperative effort between Elwood Town, UDOT, and local community members. It is being conducted under the guidance of Elwood Town Officials.

The following individuals participated in the initial meetings to provide input used to create this document. This group listed below will be referred to as the Technical Advisory Committee or "TAC" for this document.

- Greg Iverson, Mayor, Elwood Town
- Ron Thompson, City Council
- Steve Woerner, City Council
- Neil Anderson, City Council
- Bart Hoss, Planning Commission
- Tim Nichols, Planning Commission
- Travis Nilson,
 Planning Commission
- Tina Barker, Town Clerk
- Kent Wiggins, Deputy, Box Elder County Sheriff Dept.
- Rhonda Pace, Resident
- Mark Hansen, Resident
- Colleen Hansen, Resident

- Kevin Hansen, Resident
- John Baxter, Resident
- Carl M. Bolent, Resident
- Brad Kasperch, Resident
- Brad Frank, Resident
- Kim Yates, Resident
- Ron Fullmer, Resident
- Matt Walters, Resident
- James Jennings, Resident
- Steve Haramot, Resident
- Brad Frank, Resident
- Mark Teuscher, Planning

Figure 1-1. Elwood Town Study Area Map

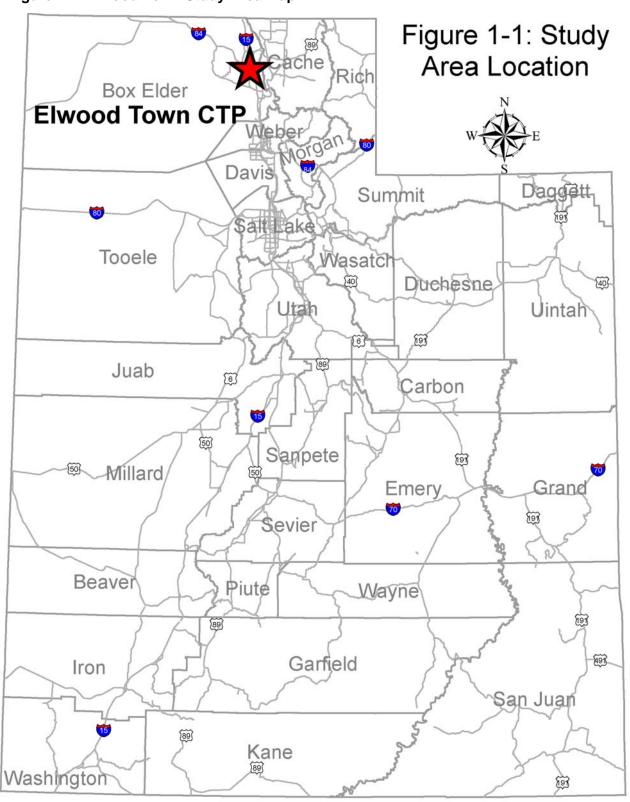


Figure 1-2. Study Vicinity Map

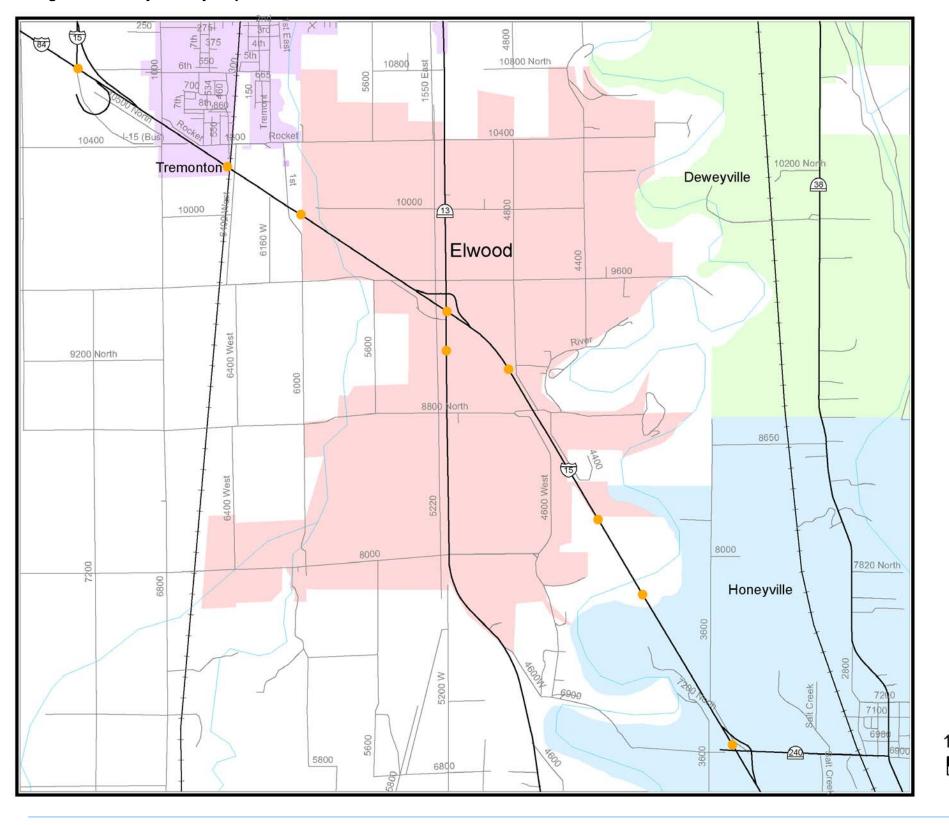
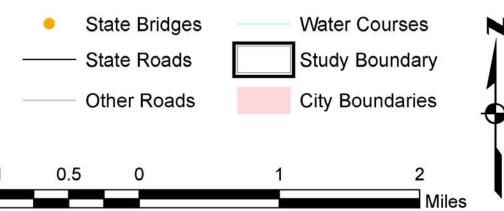


Figure 1-2: Elwood Study Area Vicinity



The study process for the Elwood Town
Community Transportation Plan consists of
three basic parts: (1) inventory and analysis
of existing conditions, (2) projection of future
conditions, and (3) development of a
community transportation master plan
(CTP). This process involves the
participation of the TAC for guidance,
review, evaluation and recommendations in
developing the TMP to include development
of future projects for the identified study
area.

The TAC will evaluate each part of the study process. Their comments will be incorporated into the study's final report draft. The remainder of the final report draft will focus on the recommendation and implementation portion of the transportation plan program. Transportation projects that will be recommended for the short-term and long-range needs will be developed based on the TAC's recommendations and concurrence.

The study process allows for the solicitation of input from the public at two TAC workshops. This public participation element is included in the study process to ensure that any decisions made regarding this study are acceptable to the community.

The first TAC workshop provides an inventory and analysis of existing conditions and identification of needed transportation improvements. The second TAC workshop will focus on prioritization of projects,

estimation of project costs, and discussion of the funding processes.

The TAC is expected to recommend those comments that are to be incorporated into the report and applicable to the goals of this study. The final report draft will be submitted to the City for review and comments.



Upon local review of the draft report, UDOT will prepare appropriate changes and submit the final report to the City for approval. The final report will describe the study process, findings and conclusions, and will document the recommended transportation system projects and improvements.

2. Existing Conditions

An inventory and evaluation of existing conditions within the study area was conducted to identify existing transportation problems or issues. The results of the investigation follow.

2.1. Land Use

In order to analyze and forecast traffic volumes, it is essential to understand the land use patterns within the study area. Much of the Town is zoned Residential, but there are also many issues dealing with commercial and industrial properties. By analyzing the patterns or changes in land use, we can better predict the ever-changing transportation needs.



The Elwood Town Zoning map follows on the next page.

2.2. Environmental

In Utah there are a variety of local environmental issues. Each of the cities and counties need to look at what are the

environmental issues in their areas on a case-by-case basis. There are many resources that can help local entities to determine what issues need to be addressed and how any problems that may exist can be resolved.

Some of the environmental concerns around the State are wetlands, endangered species, archeological sites, and geological sites among other issues. Environmental concerns should be addressed when looking at an area for any type of improvement to the transportation system. Protecting the environment is a critical part of the transportation planning process.

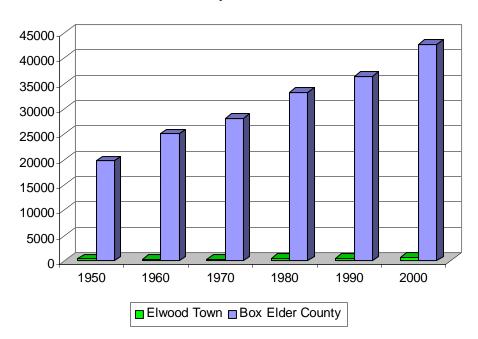
2.3. Socio-Economic (Census Brief: Cities and Counties of Utah, May 2001)

Elwood Town ranks 156th out of 235 incorporated cities and towns for population in the State of Utah. Historical growth rates have been identified for this study, because past growth is usually a good indicator of what might occur in the future. Chart 2-1 identifies the population growth over the past 50 years for the State of Utah, Box Elder County and Elwood Town. Chart 2-2 identifies that population change in Elwood Town has ranged from 84.39% between 1950 and 1960 to –17.37% between 1980 and 1990, while growth in the State has gained between 18 and 38 percent during the past 50 years.

Chart 2-1 Population

Year	Utah	Box Elder County	Elwood Town
1950	688,862	19,734	393
1960	890,627	25,061	345
1970	1,059,273	28,129	294
1980	1,461,037	33,222	481
1990	1,722,850	36,485	575
2000	2,233,169	42,745	678

Population



Source: U.S. Bureau of the Census http://www.govenor.utah.gov/dea/OtherPublications.html

Chart 2-3 identifies yearly population growth rates for the State of Utah and Emery County.

As has the State population has grown every decade from 1950 until 2000, Box Elder County has shown a similar growth pattern of population growth over the same period.

Elwood Town has some unique demographic characteristics when compared with the State, particularly with age demographics. In the 25 to 54-age category, the State is at 38.6% the County is at 35.7% and the Town is at 37.0%. For the 65+-age category, the State is at 8.5%, the County is at 10.4% and the Town is at 8.8%. The State's median age is 27.1 years and the County's median age is 28.0 years, Town's median age is 29.4 years. Another interesting statistic is that of Veteran status with State at 10.7%, County 11.4%, and Elwood Town at 10.5%.



The 2000 median household income in Elwood Town is \$46,406, compared to the State median household income of \$45,726.

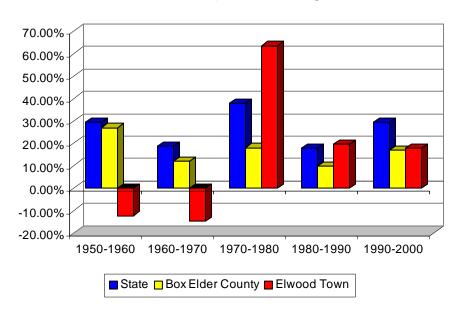
The unemployment rate in Elwood Town was 1.1 percent in 2000. The Utah Department of Employment Security (UDES), in 2000 there were approximately 309 employed people in Elwood Town or 66.6% of the population. The Town has 5 unemployed people, which is 1.1% of the population. There are 18,298 employed people in Box Elder County or 62.5% percent of the population. The county has 1,013 people unemployed, which is 3.5% of the population.

The majority of employees in Box Elder County work in three primary employment sectors: Manufacturing, Trade and Government as shown in Chart 2-5. In the county, these sectors make up 78.58% of the labor force. Another interesting note was that housing built from 1990-2000 was 19.4% of total for Elwood Town compared to 25% for the state. Also homes built before 1939 were 30.8% of the total for Elwood Town with 10% for the state.

Chart 2-2. Population Change

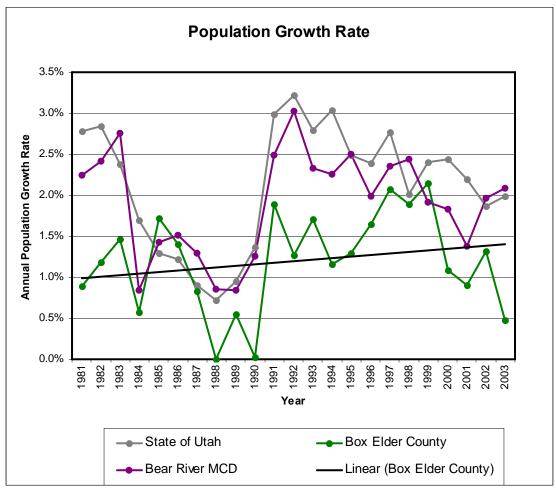
Decade	State of Utah	Box Elder County	Elwood Town
1950-1960	29.29%	26.99%	-12.21%
1960-1970	18.94%	12.24%	-14.78%
1970-1980	37.93%	18.11%	63.61%
1980-1990	17.92%	9.82%	19.54%
1990-2000	29.62%	17.16%	17.91%

Decenial Population Change



Source Data: U.S. Bureau of the Census http://www.govenor.utah./dea/OtherPublications.html

Chart 2-3. Population Growth Rate (1980-2000)

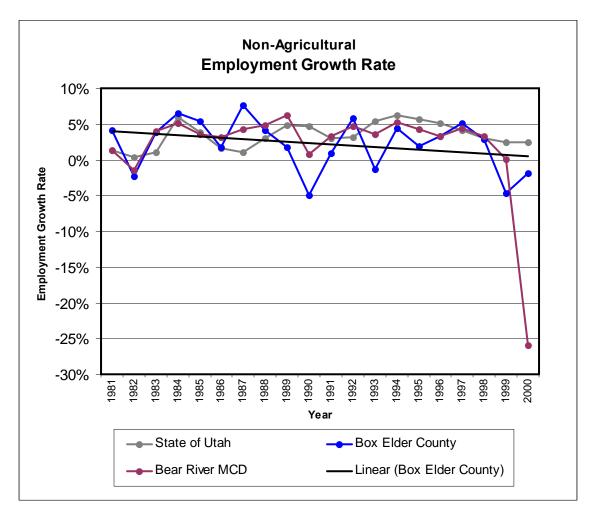


MCD = Multi-County Districts

Bear River MCD = Box Elder, Cache, & Rich Counties

Source: Governors Office of Planning and Budget http://www.governor.utah.gov/dea

Chart 2-4. Employment Growth Rate (1980-2000)



MCD = Multi-County Districts
Bear River MCD = Box Elder, Cache, & Rich Counties

Source: Governors Office of Planning and Budget http://www.governor.utah.gov/dea

Chart 2-5. Employment Occupation Sectors (1980-2000)

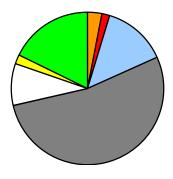
Sector	1980	1990	2000	∆ % 1980-2000
Construction	4.68%	3.05%	5.47%	79.52%
FIRE	2.24%	1.72%	2.15%	46.92%
Government	17.58%	13.79%	13.50%	17.86%
Manufacturing	44.35%	53.27%	43.96%	52.15%
Mining	0.07%	0.09%	0.18%	300.00%
Services	10.54%	9.00%	11.82%	72.09%
TCPU	1.68%	1.93%	2.45%	123.59%
Trade	20.22%	17.88%	21.12%	60.32%

FIRE = Finance, Insurance & Real Estate
TCPU = Telecommunications & Public Utilities

1980 Employment Sectors



1990 Employment Sectors



Source: Governors Office of Planning and Budget http://www.governor.utah.gov/dea/HistoricalData.html

2.4. Functional Street Classification

This document identifies the current functional characteristics of the selected roadway network of Elwood Town.

Functional street classification is a subjective means to identify how a roadway functions when a combination of the roadway's characteristics are evaluated.

These characteristics include; roadway configuration, right-of-way, traffic volume, carrying capacity, property access, speed limit, roadway spacing, and length of trips using the roadway.

The primary functional classifications used in categorizing selected roadways of Elwood Town are: Interstate, Principle Arterial, Major Collector, Minor Collector and Local. An Arterial's function is to provide traffic mobility at higher speeds with limited property access. Traffic from the local roads is gathered by the Collector system, which provides a balance between mobility and property access trips. Local streets and roads serve property access based trips and these trips are generally shorter in length.

The Elwood Town area is accessed by I-15 via SR-13. SR-13 bisects the Town north to south. I-15 extends southeast toward the Wasatch Front, Ogden area, at a distance of approximately 36 miles.

The current functionally classified system generally defines the higher traffic roads, so

only minor additions or changes will be required.



2.5. Bridges

There are eleven bridges on the state system located in the study area that could be eligible for federal bridge maintenance, rehabilitation, or replacement funds. Bridges are maintained and minor repairs made with maintenance funds. A bridge is rehabilitated or replaced as it deteriorates over time and as traffic volumes increase. (Figure 10 Bridge Sufficiency Rating)

Table 2-1 compares the bridges in the study area and identifies their sufficiency rating and location. Sufficiency rating indicates current condition of the structure with a rating of 100 showing a structure that is in excellent shape. A rating nearing 50 will reveal a structure that is in need of attention and is eligible for federal funding.

Figure 2-2. Functional Classification Map

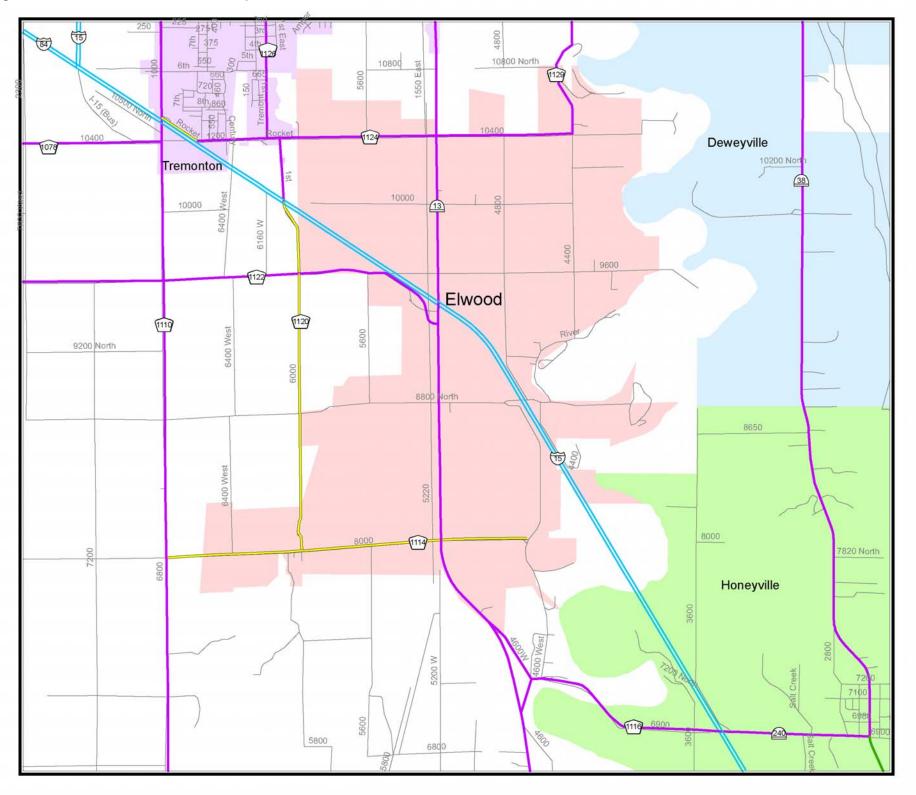


Figure 2-2: Existing State and Federal Routes Classification

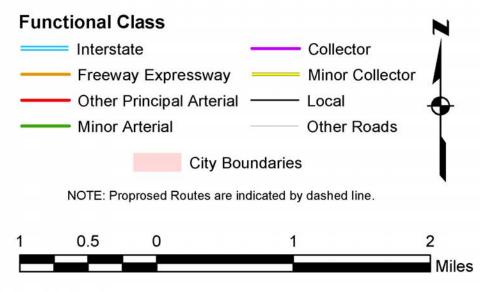


Figure 2-3. Bridge Sufficiency Map

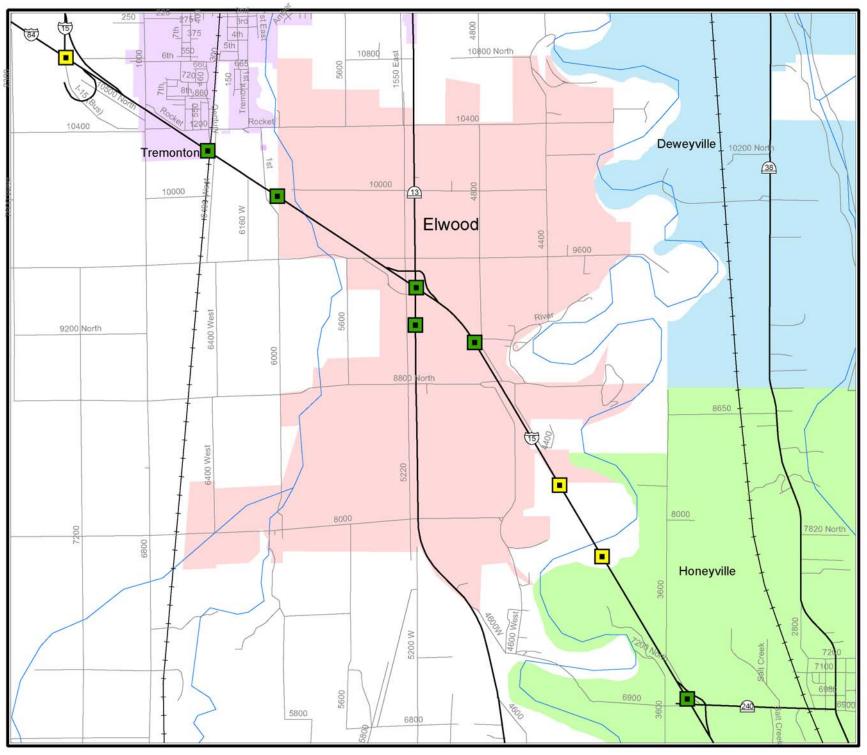


Figure 2-3: Bridge Sufficiency Rating

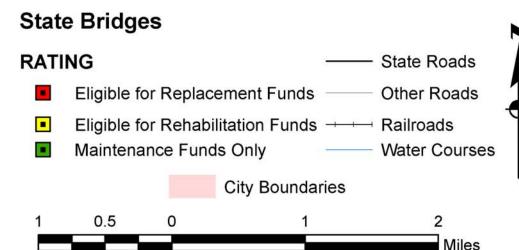


Table 2-1. Bridge Sufficiency RatingsSource: Utah Department of Transportation/Structures Division

Number	Location	Maximum Span	No. Lanes & Road Width	Sidewalk	Sufficiency Rating
0F 178	I-15 NBL & SBL	105.97 ft	2 Lns 54.46 ft	No	97.5
0F 3	I-15 NB & SB	70.87 ft	2 Lns 28.87 ft	No	93.0
1F 2	Bear River	60.04 ft	2 Lns 35.11 ft	No	68.1
0F 24	I-15 NBL & SBL	67.88 ft	2 Lns 35.06 ft	No	78.2
3E 1548	Corinne Canal	20.01 ft	1 Ln N/A	No	95.8
0E 1492	Corinne Canal	24.93 ft	4 Lns N/A	No	79.0
0F 4	I-15 NB & SB	80.05 ft	2 Lns 28.87 ft	No	93.0
1F 184	Iowa String Road	61.02 ft	2 Lns 44.29 ft	No	95.6
2F 184	Iowa String Road	61.02 ft	2 Lns 44.29 ft	No	95.8
1F 517	I-84	136.16 ft	2 Lns 29.86 ft	No	83.9
3F 517	I-84	136.16 ft	2 Lns 44.29 ft	No	96.9



2.6. Traffic Counts

Recent average daily traffic count data were obtained from UDOT. Table 2-2 shows the traffic count data on the key roadways of the study area. The number of vehicles in both directions that pass over a given segment of roadway in a 24-hour period is referred to as the average annual daily traffic (AADT) for that segment.

Road	Segment	Year	AADT
13	North of Bear River to S INCL of Elwood	2004	1,560
13	S INCL of Elwood to I-15	2004	1,410
13	I-15 to N INCL of Elwood	2004	6,520
13	N INCL of Elwood to SE INCL of Tremonton	2004	6,280
13	SE INCL of 13 Tremonton to south of SR-102		4,065
15	North of Brigham City to SE Honeyville Int.	2004	23,180
15	15 Honeyville Int. to Elwood Int.		22,479
15	15 Elwood Int. to I-84		16,575
15	I-84 to Garland Int.	2004	15,530
84	West Tremonton Int. to I-15	2004	9,662

A map illustrating existing and future traffic, peak season traffic, and roadway capacities is presented in the Traffic Forecast section 3.2.

2.7. Traffic Accidents

Traffic accident data was obtained from UDOT's database of reported accidents

from 2004. Table 3 summarizes the accident statistics for those segments for the year 2004. Additional information includes the average daily traffic, the number of reported accidents, and the accident rates. The roadway segment accident rates were determined in terms of accidents per million vehicle miles traveled. The crash rates for each roadway segment are compared to the expected crash rate for similar facilities across the state.

Upon review of the accident data for the state system in the area, there appears to be higher than expected accident rates at the following locations:

- On SR-13 from the south incorporated city limits (INCL) of Elwood to I-15
- On SR-13 from the southeast INCL of Tremonton to south of Haws Corner
- I-84 from West Tremonton Interchange to I-15, a short distance of 0.19 miles.

The remainder of the state system shows a lower than expected accident rate. Figure 2-4 shows a safety index, which incorporates crash data taken from 2001-2003. Various segments of the state highway system and associated crash data are shown.

Elwood Town may wish to review the accident history for the local street system to identify any specific accident hot spot locations.

Table 2-3. Crash Data 2004

					Crash Rate **	
Road	From Milepost	End Milepost	ADT (2004)	# Crashes (2004)	Actual	Expected*
13	14.00	15.92	1,560	1	0.99	2.41
13	15.93	17.84	1,410	4	3.41	2.41
13	17.85	18.88	6,520	3	1.32	1.95
13	18.89	19.89	6,280	0	0.00	1.95
13	19.90	20.50	4,065	1	2.26	1.87
15	370.00	372.73	23,180	5	0.21	0.83
15	372.74	376.53	22,479	0	0.00	0.83
15	376.54	379.84	16,575	18	0.83	0.92
15	379.85	381.07	15,530	6	0.84	0.92
84	40.82	42.01	9,662	3	1.47	0.83

* Statewide average accident rates for functional class and volume group. ** Accident rates are per million vehicle miles traveled Red indicates higher than expected rates of accidents



Figure 2-4. State Road Crash Rates

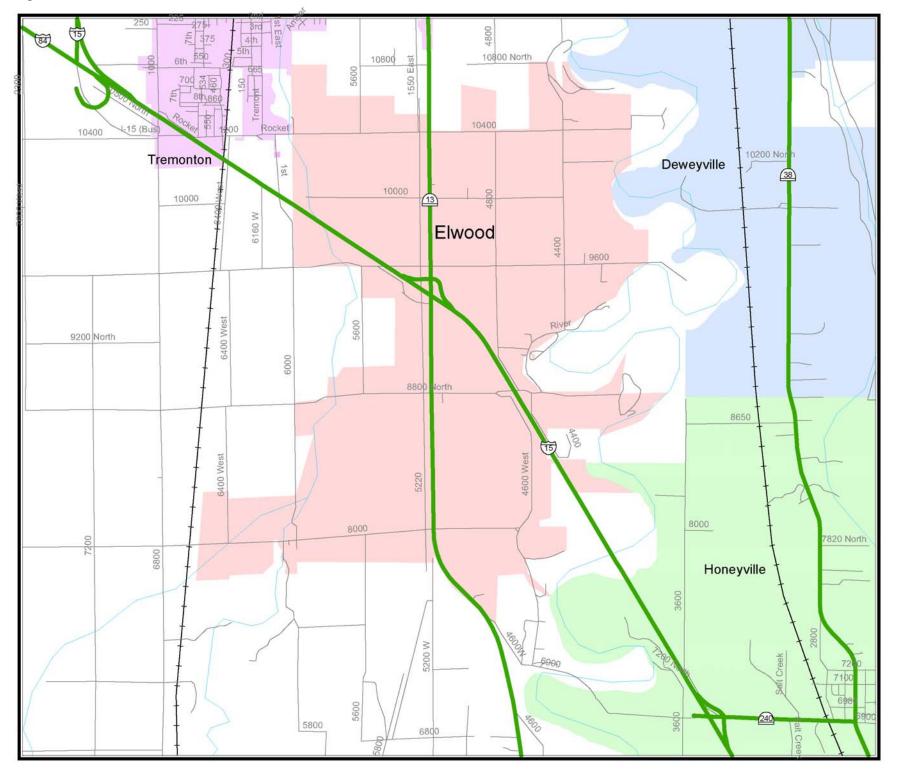
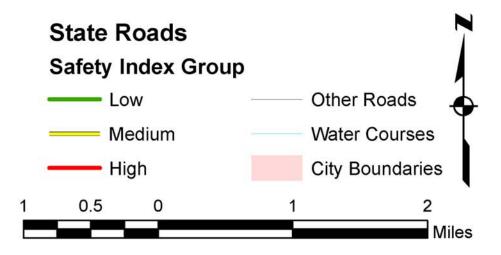


Figure 2-4: State Road Safety Index



2.8. Bicycle and Pedestrian

The Federal Highway Administration recognizes the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system, and encourages state and local governments to incorporate all necessary provisions to accommodate bicycle and pedestrian traffic. In following this directive, Elwood Town is encouraged to adopt a "complete streets" philosophy that allows for the advancement of a transportation system for both motorized and non-motorized travel.

2.8.1. Biking/Trails

There currently are not any bicycle facilities in Elwood Town. The lack of facilities has forced residents who choose to ride to do so on the gravel roadway shoulders or in the travel lane. None of the area roads have paved shoulders, which would greatly increase bicycling opportunities in Elwood Town.

The community has indicated a desire to develop a Town Tails Master Plan that would identify future cycling needs. With the population growth that is taking place in Elwood, a Trails Master Plan would help guide the developmental process as building permits are requested, so as not to lose open space opportunities.

Mountain biking is not an activity found in Elwood Town due to the nature of the locale. However, as is the case in most of Utah's rural areas, the Town sees a fair share of ATV use. The community accepts this practice and there have not been any reportable problems, such as out-of-bounds riding.

2.8.2. Pedestrians

Walking is a popular activity with residents of Elwood Town, and pedestrian traffic is a common occurrence as walking is used both for transportation and as a recreational pursuit. While the practice is common, conditions are less than adequate. There aren't any sidewalks and pedestrians must use the roadway gravel shoulders or the motor vehicle travel lane. Many school-age children walk to their bus stops along these roads; and with posted speed limits of 45-55 mph, safety concerns have been raised.

2.9. Public Transportation

There are no public transportation systems serving Elwood directly. The Utah Transit Authority provides the nearest city transit system with city bus service between Brigham City, 15 miles south of Elwood, and Salt Lake City.

Greyhound provides intercity bus service with a stop in nearby Tremonton on a route linking the Pacific Northwest, Salt Lake City, and Chicago.

Intercity railroad passenger service is available in Salt Lake City, which is 75 miles to the south, which is a stop on the route of

"California Zephyr," linking Chicago with the San Francisco Bay Area.

Scheduled airline service is available at the Salt Lake City International Airport.

2.10. Freight

Considerable intercity freight passes through Elwood on Interstate Highway 15/84, which is located about five miles south of where both freeways join together in Tremonton.

At Exit 376, where State Route 13 joins I-15/84, an Exxon Auto/Truck Stop attracts a number of local and long haul trucks each day. Exit 376 also has considerable truck traffic traveling to and from the new Wal-Mart warehouse located ten miles to the south near the town of Corrine.



Remaining truck traffic in Elwood consists primarily of local delivery and agricultural trucks, as well as Box Elder County trucks traveling to and from their road shed on 8800 North.

Future plans include a proposed industrial park accessing the Union Pacific Railroad's

Malad Branch at the west end of Elwood on 8000 North.

2.11. Aviation Facilities & Operations

There are no aviation facilities in Elwood; the nearest private airport is located about 12 miles to the south in Brigham City. The nearest commercial airline service is 75 miles to the south at the Salt Lake City International Airport.

2.12. Revenue

Maintenance of existing transportation facilities and construction of new facilities come primarily from revenue sources that include the Elwood Town general fund, federal funds and State Class C funds.

Financing for local transportation projects consists of a combination of federal, state, and local revenues. However, this total is not entirely available for transportation improvement projects, since annual operating and maintenance costs must be deducted from the total revenue. In addition, the Town is limited in their ability to subsidize the transportation budget from general fund revenues.

2.12.1. State Class B and C Program

The distribution of Class B and C Program monies is established by state legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits.

Twenty-five percent of the funds derived from the taxes and fees are distributed to cities and counties for construction and maintenance programs.

Class B and C funds are allocated to each Town and county by the following formula: 50% based on the population ratio of the local jurisdiction with the population of the State, 50% based on the ratio that the Class B roads weighted mileage within each county and the class C roads weighted mileage within each municipality bear to the total class B and Class C roads weighted mileage within the state. Weighted means the sum of the following: (i) paved roads multiplied by five; (ii) graveled road miles multiplied by two; and (iii) all other road types multiplied by one. (Utah Code 72-2-108) For more information go to UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select the tab for "Local Government Assistance" here you will find the Regulations governing Class B&C funds.

The table below identifies the ratio used to determine the amount of B and C funds allocated.

Class B and C funds can be used for maintenance and construction of highways, however thirty percent of the funds must be used for construction or maintenance projects that exceed \$40,000. Class B and C funds can also be used for matching

federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

Elwood Town received \$56,253.14 in 2005 for its Class C fund allocation.

Based on	Of
50%	Roadway Mileage *Based on Surface Type Classification (Weighted Measure) Paved Road (X 5) Graveled Road (X 2) Other Road (X 1)
50%	Total Population

Apportionment Method of Class B and C Funds

2.12.2 Federal Funds

There are federal monies that are available to cities and counties through federal-aid programs. The funds are administered by the Utah Department of Transportation. In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) provides funding for any road that is functionally classified as a collector street or higher. STP funds can be used for a range of projects including rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the State for urban areas. A portion of the STP funds can be used in any area of the State, at the discretion of the State Transportation Commission.

Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Advisory Committee reviews the applications and then a portion of those are recommended to the State Transportation Commission for funding. Transportation enhancements include 12 categories ranging from historic preservation, to bicycle and pedestrian facilities, to water runoff mitigation. Other funds that are available are State Trails Funds, administered by the Division of Wildlife Resources.

The amount of money available for projects specifically in the study area varies each year depending on the planned projects in UDOT's Region One. As a result, federal aid program monies are not listed as part of the study area's transportation revenue.

2.12.3 Local Funds

Elwood Town, like most cities, has utilized general fund revenues in its transportation program. Other options available to improve the Town's transportation facilities could involve some type of bonding arrangement, either through the creation of a redevelopment district or a special improvement district. These districts are organized for the purpose of funding a single, specific project that benefits an identifiable group of properties. Another source of funding is through general obligation bonding arrangements for projects

felt to be beneficial to the entire entity issuing the bonds.

2.12.4 Private Sources

Private interests often provide alternative funding for transportation improvements. Developers construct the local streets within the subdivisions and often dedicate right-ofway and participate in the construction of collector or arterial streets adjacent to their developments. Developers can be considered as an alternative source of funds for projects because of the impacts of the development, such as the need for traffic signals or street widening. Developers should be expected to mitigate certain impacts resulting from their developments. The need for improvements, such as traffic signals or street widening can be mitigated through direct construction or impact fees.



3. Future Conditions

3.1. Land Use and Growth

Elwood Town's Community Transportation
Plan must be responsive to current and
future needs of the area. The area's growth
must be estimated and incorporated into the
evaluation and analysis of future
transportation needs. This is done by:

- Forecasting future population, employment, and land use;
- Projecting traffic demand;
- Forecasting roadway travel volumes;
- Evaluating transportation system impacts:
- Documenting transportation system needs; and
- Identifying improvements to meet those needs.

This chapter summarizes the population, employment, and land use projections developed for the project study area. Future traffic volumes for the major roadway segments are based on projections utilizing 20 years of traffic count history. The forecasted traffic data are then used to identify future deficiencies in the transportation system.

3.1.1. Population and Employment Forecasts

The Governor's Office of Planning and Budget develop population and employment projections. The current population and

employment levels, as well as the future projections for each are shown for Elwood Town and Box Elder County in the following table.

Population and Employment

3.1.2 Future Land Use

Year	City	County		
	Population	Population	Employment	
2000	678	42,860	17,794	
2030	1,118	73,833	39,214	

The Town has an annexation plan that describes where it plans to grow. Some areas for developments were discussed during the course of the Community Transportation Plan. Updated Land Use documents can be found in the Elwood Town General Plan.

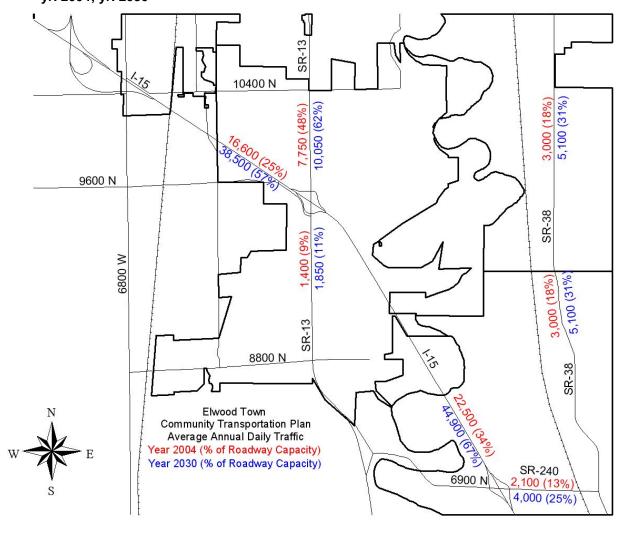
While specific development plans change with time, it is important to note possible areas of development within the Elwood Town area. Commercial and industrial growth is also important in understanding transportation needs.

3.2. Traffic Forecast

Traffic in the Elwood Town area is growing and will continue to grow. Although the population projections from the Governors Office of Planning and Budget show a 1.9% annual growth, traffic has historically grown at about 3% to 4%. This traffic growth is associated with the bedroom aspects that Elwood Town provide to Brigham City and

Tremonton. The map below shows average annual daily traffic for years 2004 and 2030. Also shown is the percentage of the roadway capacity the traffic will reach. The map illustrates that no corridors should have capacity issues by the year 2030 if historical trends continue.

Figure 3-1. Average Annual Daily Traffic yr. 2004; yr. 2030



4. Transportation Improvement Projects

4.1. Current State Transportation Improvement Program (2004-2008 STIP)

At the present time there are several projects under consideration and investigation in the Elwood Town area.

Currently in the STIP are the following Projects:

- SR-102; Over Corinne Canal at Haws
 Corner; Bridge Replacement with Box
 Culvert #D-446
- I-84; SR-83 to SR-102; Concrete Pavement Rehabilitation
- SR-13; I-15 (Elwood Exit) to SR-102;
 Asphalt Pavement Rehabilitation

Also, these projects are currently listed on the State of Utah's Long Range Plan, Utah Transportation 2030:

 Reconstruction and Bridge Replacement on SR-13 from SR-102 to I-15

4.2. Recommended Projects

The following list identifies the five projects that have been identified as having the highest priority to the Elwood Town Transportation Advisory Committee. These needs were identified through a series of meetings where the TAC identified the needs and set priorities for projects.



- Drainage Plan study for Elwood Town
- SR-13 and 9600 North Intersection Relocation, Signal and Advanced Warning System
- Improve the Interchange at I-15 and SR-13 (better truck turning radii)
- Widen SR-13 to 5 Lanes
- Curb and Gutter and Sidewalk with all new developments (placed by developers)

Additionally, many concerns and issues were identified which are found on the attached list.

4.3. Revenue Summary

4.3.1. Federal and State Participation

Federal and State participation is important for the success of implementing these projects. UDOT needs to see the Transportation Master Plan so that they understand what the Town wants to do with its transportation system. UDOT can then weigh the priorities of the city against the rest of the state. It is important for Elwood

Town to promote projects that can be placed on UDOT's five-year Statewide

Transportation Improvement Program
(STIP) as soon as possible. The process for placing projects into the STIP and funding of these projects can be found at UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select the tab for "

Planning and Programming" here there is a subtopic entitled "Statewide Transportation Improvement Program (STIP)" that describes this program in detail. Additionally coordination with UDOT's Region Director and Planning Engineer will be practical.

4.3.2. Town Participation

The Town will fund the local Elwood Town projects. The local match component and partnering opportunities vary by the funding source.

4.4. Other Potential Funding

Previous sections of this chapter show significant shortfalls projected for the short-range and long-range programs. The following options may be available to help offset all or part of the anticipated shortfalls:

- Increased transportation impact fees.
- Increased general fund allocation to transportation projects.
- General obligation bonds repaid with property tax levies.
- Increased participation by developers, including cooperative programs and incentives.

- Special improvement districts (SIDs), whereby adjacent property owners are assessed portions of the project cost.
- Sales or other tax increase.
- State funding for improvements on the county roadway system.
- Increased gas tax, which would have to be approved by the State Legislature.
- Federal-aid available under one of the programs provided in the federal transportation bill (SAFETEA-LU is the current bill).

Increased general fund allocation means that General Funds must be diverted from other governmental services and/or programs. General obligation bonds provide initial capital for transportation improvement projects but add to the debt service of the governmental agency. One way to avoid increased taxes needed to retire the debt is to sell bonds repaid with a portion of the municipalities' State Class monies for a certain number of years.



Participation by private developers provides a promising funding mechanism for new projects. Developers can contribute to transportation projects by constructing onsite improvements along their site frontage and by paying development fees. Municipalities commonly require developers to dedicate right-of-way and widen streets along the site frontage. A negative side of the on-site improvements is that the streets are improved in pieces. If there are not several developers adjacent to one another at the same time, a continuous improved road is not provided. One way to overcome this problem is for the jurisdiction to construct the street and charge the developers their share when they develop their property.

limit. However, development fees are often a controversial issue and may or may not be an appropriate method of funding projects.



Another way developers can participate is through development fees. The fees would be based on the additional improvements required to accommodate the new development and would be proportioned among each development. The expenditure of additional funds provided by the fees would be subject to the Town's spending

Elwood Town Transportation Needs and Cost Estimates

	Project Description / Concept					Estimated
						Project
Route	State Highway Projects (LRP)	Start Point	End Point	Quantity	Improvement	Cost
SR-13	Widen SR-13 to 5 lanes	17.84	18.89	1 mile	Widening	\$1,500,000
I-15	Additional Interchange for Tremonton Area			Lump	New Interchange	\$40,000,000
I-15/SR-13	Improve Interchange at I-15 and SR-13 (better truck turning Radii)			Lump	Int. Improvments	\$20,000,000
I-15/I-84	Improved Signage on I-15/I-84 for better direction communication			Lump		\$10,000
I-15	List Elwood on Exit 376 Signage and Improve Signange			Lump		\$5,000
	Engine Brake Noise Ordinance Enforcement Signs (when Ordinance in place)			Lump		\$5,000
	Local Streets Projects					
	Curb and gutter and Sidewalk with all new developments (placed by developers)					\$0
	Curb and gutter on 9600 North, Both Sides	6000 West	City Limits	2.6 Miles	Curb and Gutter	\$150,000
	8800 North/4600 West Frontage Road, Both Sides of Freeway	4800 West	9600 North	2.5 Miles	New Construction	\$2,500,000
	Guard Rail on River Road at Pelican Point			500 Feet	Safety	\$50,000
	Widen and Pave 10000 North	I-15	4400 West	2 Miles	Improvement	\$1,500,000
	Reconstruct and Improve Pavement on 10400 North at SR-13			Lump	Intersection Improve.	\$30,000
I-15	8800 North Overpass Replacement				Bridge Replacement	\$10,000,000
	Pedestrian/ Bicycle/ATV Projects					
	Safe Routes to Schools			Lump	Study	\$5,000
	Sidewalk on 9600 North, Both Sides	6000 West	City Limits	2.6 Miles	New Construction	\$250,000
	Enhancements/Transit					
	Town Gateway on SR-13			Lump	Enhancement	\$100,000
	Street Lighting			Lump	Lighting	\$1,000,000
	Traffic Signals (ITS)					
SR-13	SR-13 and 9600 North, Intersection Relocation, Signal and Advance Warning System			Lump	Intersection/Signal	\$500,000
	Studies					
	Drainage Plan			Lump	Study	\$10,000
SR-13	Safety Study on SR-13			Lump	Study	\$5,000
	Pedestrian and Bicycle Trail Plan for Elwood			Lump	Study	\$10,000
	OHV Trail Plan			Lump	Study	\$10,000
	Trails in Park			Lump	Study	\$10,000
	UTA Shuttle to Commuter Rail in Ogden/Brigham City			Lump	Study	\$10,000
	<u> </u>		Est	imated Total Needs	Costs	\$77,660,000

^{*} Review Ordnance/Process for New Developments to accommodate Traffic Circulation * Preserve the Natural Scenic Beauty of Top Side by working with Developers.

5. Planning Issues and Guidelines

Provided below is a discussion of various issues with a focus on elements that promote a safe and efficient transportation system in the future.

5.1. Guidelines and Policies

These guidelines address certain areas of concern that are applicable to Elwood Town Transportation Master Plan.

5.1.1. Access Management

This section will define and describe some of the aspects of Access Management for roadways and why it is so important.

Access Management can make many of the roads in a system work better and operate more safely if properly implemented. There are many benefits to properly implemented access management. Some of the benefits follow:

- Reduction in traffic conflicts and accidents
- Reduced traffic congestion
- Preservation of traffic capacity and level of service
- Improved economic benefits businesses and service agencies
- Potential reductions in air pollution from vehicle exhausts

5.1.1.1. Definition

Access management is the process of comprehensive application of traffic engineering techniques in a manner that

seeks to optimize highway system performance in terms of safety, capacity, and speed. Access Management is one tool of many that makes a traffic system work better with what is available.

5.1.1.2. Access Management Techniques

There are many techniques that can be used in access management. The most common techniques are signal spacing, street spacing, access spacing, and interchange to crossroad access spacing. There are various distances for each spacing, dependant upon the roadway type being accessed and the accessing roadway. UDOT has developed an access management program and more information can be gathered from the UDOT website and from the Access Management Program Coordinator.

5.1.1.3. Where to Use Access Management

Access Management can be used on any roadway. In some cases, such as State Highways, access management is a requirement. Access management can be used as an inexpensive way to improve performance on a major roadway that is increasing in volume. Access management should be used on new roadways and roadways that are to be improved so as to prolong the usefulness of the roadway.

5.1.2. Context Sensitive Solutions

Context Sensitive Solutions (CSS) addresses the need, purpose, safety and

service of a transportation project, as well as the protection of scenic, aesthetic, historic, environmental and other community values. CSS is an approach to transportation solutions that find, recognize and incorporate issues/factors that are part of the larger context such as the physical, social, economic, political and cultural impacts. When this approach is used in a project the project become better for all of the entities involved.

5.1.3. Recommended Roadway Cross Sections

Cross sections are the combination of the individual design elements that constitute the design of the roadway. Cross section elements include the pavement surface for driving and parking lanes, curb and gutter, sidewalks and additional buffer/landscape areas. Right-of-way is the total land area needed to provide for the cross section elements.

The design of the individual roadway elements depends on the intended use of the facility. Roads with higher design volumes and speeds need more travel lanes and wider right-of-way than low volume, low speed roads. The high use roadway type should include wider shoulders and medians, separate turn lanes, dedicated bicycle lanes, elimination of on street parking, and control of driveway access. For most roadways, an additional buffer area is provided beyond the curb line. This buffer area accommodates the sidewalk

area, landscaping, and local utilities.

Locating the utilities outside the traveled way minimizes traffic disruption in utility repairs or changes in service are needed.

Federal Highway standard widths apply on the all roads that are part of the state highway system. Also, all federally funded roadways in Elwood Town and Box Elder County must adhere to the same standards for widths and design.

5.2. Bicycles and Pedestrians

5.2.1. Bicycles/Trails

Bicycles are allowed on all roadways, except where legally prohibited, and as such should be a consideration on all roads that are being designed and constructed, and as roadway improvements are taking place. To increase the level of interest in bicycling in Elwood Town, as growth occurs developers should be encouraged to include separate bicycle/pedestrian pathways in new developments. Opportunities to increase shoulder width in conjunction with a roadway project should be taken whenever technically, environmentally, and financially feasible. The Town is encouraged to follow their desire as noted in Chapter 2 of this Plan and pursue the creation of a Trails Master Plan. When a plan is developed, it will be important to note that regardless of the trails system's function, as all bike/trail facilities are planned, designed and constructed, review of the connectivity of the trails system is critical. With input from the

community, a review of the connectivity of the trails should play an integral role in the decision making process for potential projects. In order to enhance the quality of life for those in the community, the trails should be accessible to all users and incorporate ADA requirements.

The trails, when constructed, may have slight variances in application type due to possible differences in the terrain at a specific trail location or differing user needs. However, regardless of the design type, the applicable design standards found in the latest version of the AASHTO Guide for the Development of Bicycle Facilities should be followed, as well as the Manual on Uniform Traffic Control Devices (MUTCD) guidelines for appropriate signage of the trails system.

5.2.2 Pedestrians

Every effort should be made to accommodate pedestrians in Elwood Town. As referenced in Chapter 2 of this Plan, there is a lack of sidewalks throughout. An opportunity to include accessible sidewalks, while adhering to ADA requirements, during construction of other projects is encouraged. When constructing a sidewalk, for the safety and convenience of. pedestrian traffic, sidewalk placement should be free from debris and obstructions or impediments such as utility poles, trees, bushes, etc. As growth continues in the area, Elwood Town should require developers to include

sidewalk placement in their project plans. The interconnectedness of the Town's sidewalk system should be considered as development takes place.

Sidewalks in residential areas should be at least 5-feet wide whenever adequate rightof-way can be secured. This will provide sufficient room and a level of comfort to persons walking in pairs or passing and will specifically allow for persons with strollers or in wheelchairs to pass. On major roadways, sidewalks at least 6-feet wide and with a 6 to 10-foot park strip are desirable. In pedestrian-focused areas, such as schools, parks, sports venues or theaters, and in hotel and market districts, even wider sidewalks are recommended to accommodate and encourage a higher level of pedestrian activity, especially where tourist use would be expected. To ensure consistency of sidewalks throughout the area, UDOT's approved standard for sidewalks should be followed.

There may be opportunity for Elwood Town to begin a sidewalk placement plan through the Utah Department of Transportation's Safe Sidewalk Program, available through the Traffic and Safety Division. The Town should contact UDOT's Region One office for application requirements.

If schools are to be constructed within Elwood Town, awareness of the requirement to develop a routing plan in cooperation with the area school is paramount. The routing plan is to be reviewed and updated annually. Information regarding the Safe Routes to School program is available by contacting the Utah Department of Transportation's Traffic and Safety Division.

5.3. Enhancement Program

In 1991, the Intermodal Surface
Transportation Efficiency Act (ISTEA)
created the Transportation Enhancement
program. The program has since been
reauthorized in subsequent bills (i.e. TEA21). The Transportation Enhancement
program provides opportunities to use
federal dollars to enhance the cultural and
environmental value of the transportation
system. These transportation
enhancements are defined as follows by
SAFETEA-LU:

The term 'transportation enhancement activities' means, with respect to any project or the area to be served by the project, any of the following activities if such activity relates to surface transportation: provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists, acquisition of scenic easements and scenic or historic sites, scenic of historic highway programs (including the provision of tourist and welcome center facilities), landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad

facilities and canals), preservation of abandoned railway corridors (including the conservation and use thereof for pedestrian or bicycle trails), control and removal of outdoor advertising, archeological planning and research, environmental mitigation to address water pollution due to highway runoff or reduce vehicle caused wildlife mortality while maintaining habitat connectivity, and establishment of transportation museums.

The Utah Transportation Commission, with the help of an advisory committee, decides which projects will be programmed and placed on the Statewide Transportation Improvement Program (STIP). Applications are accepted in an annual cycle for the limited funds available to UDOT for such projects. Information and Applications for the current cycle can be found on UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select "Planning and Programming", here you will find a sub-topic entitled "Transportation Enhancement Program". The UDOT Program Development Office, on or before the specified date to be considered, must receive applications. Projects will compete on a statewide basis.

5.4. Transportation Corridor Preservation

Transportation Corridor Preservation will be introduced as a method of helping Elwood Town's Community Transportation Plan.
This section will define what Corridor Preservation is and ways to use it to help

the Community Transportation Plan succeed for the Town.

5.4.1. Definition

Transportation Corridor Preservation is the reserving of land for use in building roadways that will function now and can be expanded at a later date. It is a planning tool that will reduce future hardships on the public and the town. The land along the corridor is protected for building the roadway and maintaining the right-of-way for future expansion by a variety of methods, some of which will be discussed here.

5.4.2. Corridor Preservation Techniques

There are three main ways that a transportation corridor can be preserved. The three ways are acquisition, police powers, and voluntary agreements and government inducements. Under each of these are many sub-categories. The main methods will be discussed here, with a listing of some of the sub-categories.

5.4.2.1. Acquisition

One way to preserve a transportation corridor is to acquire the property outright. The property acquired can be developed or undeveloped. When the town is able to acquire undeveloped property, the town has the ability to build without greatly impacting the public. On the other hand, acquiring developed land can be very expensive and can create a negative image for the Town. Acquisition of land should be the last resort in any of the cases for Transportation

Corridor Preservation. The following is a list of some ways that land can be acquired.

- Development Easements
- Public Land Exchanges
- Private Land Trusts
- Advance Purchase and Eminent Domain
- Hardship Acquisition
- Purchase Options

5.4.2.2. Exercise of Police Powers

Police powers are those ordinances that are enacted by a municipality in order to control some of the aspects of the community.

There are ordinances that can be helpful in preserving corridors for the Community

Transportation Plan. Many of the ordinances that can be used for corridor preservation are for future developments in the community. These can be controversial, but can be initially less intrusive.

- Impact Fees and Exactions
- Setback Ordinances
- Official Maps or Maps of Reservation
- Adequate Public Facilities and Concurrency Requirements

5.4.2.3. Voluntary Agreements and Governmental Inducements

Voluntary agreements and governmental inducements rely on the good will of both the developers and the municipality. Many

times it is a give and take situation where both parties could benefit in the end. The developer will likely have a better-developed area and the municipality will be able to preserve the corridor for transportation in and around the development. Listed below are some of the voluntary agreements and governmental inducements that can be used in order to preserve transportation corridors in the city limits.

- Voluntary Platting
- Transfer of Development Rights
- Tax Abatement
- Agricultural Zoning

Each of these methods has its place, but there is an order that any government should try to use. Voluntary agreements and government inducements should be used, if possible, before any police powers are used. Police powers should be tried before acquisition is sought. UDOT has developed a toolkit to aid in corridor preservation techniques. This toolkit contains references to Utah code and examples of how the techniques have been used in the past.

- 6.1 Travel Forecast Sheets (2003-2030)
- **6.2 Suggested Types of Street Cross-Sections**



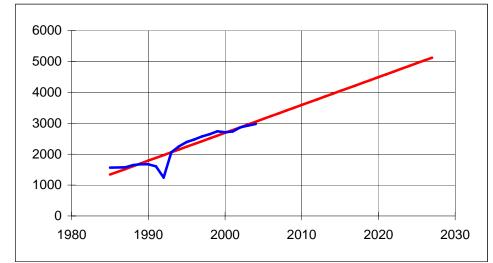
Route SR-38
Limits MP 10.83 to 14.03

Year	AADT	Forecast
1985	1,565	1339
1986	1,570	1429
1987	1,575	1519
1988	1,645	1609
1989	1,670	1699
1990	1,670	1789
1991	1,605	1879
1992	1,240	1969
1993	2,060	2059
1994	2,250	2149
1995	2,390	2239
1996	2,475	2329
1997	2,575	2420
1998	2,645	2510
1999	2,737	2600
2000	2,710	2690
2001 2002	2,735 2,870	2780 2870
2002	2,870	2960
2003	2,925	3050
2004	2,975	3140
2006	-	3230
2007		3320
2008	F	3410
2009	-	3500
2010	-	3591
2011		3681
2012		3771
2013		3861
2014		3951
2015		4041
2016	Ī	4131
2017	ľ	4221
2018	ľ	4311
2019	ļ	4401
2020	ļ	4491
2021	ļ	4581
2022	ļ	4671
2023	ļ	4762
2024	ļ	4852
2025	ļ	4942
2026	ļ	5032
2027	ļ	5122

Projection based on 1985 to 2004 data

3.2% growth rate

90 vehicles/year



5% Trucks

Notes

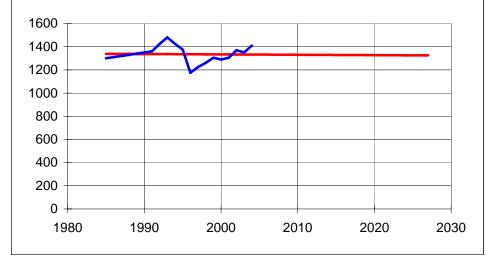


oute	SR-13	
imits	South of Interstate 15	
	South of Interstate 15	

Year	AADT	Forecast
1985	1,300	1338
1986	1,310	1338
1987	1,320	1338
1988	1,330	1337
1989	1,340	1337
1990	1,350	1337
1991	1,360	1336
1992	1,425	1336
1993	1,480	1336
1994	1,425	1335
1995	1,375	1335
1996	1,175	1335
1997	1,225	1334
1998	1,260	1334
1999	1,305	1334
2000	1,290	1333
2001	1,305	1333
2002	1,370	1333
2003	1,350	1333
2004	1,410	1332
2005		1332
2006		1332
2007		1331
2008		1331
2009		1331
2010		1330
2011		1330
2012		1330
2013		1329
2014		1329
2015		1329
2016		1328
2017		1328
2018		1328
2019		1327
2020		1327
2021	<u> </u>	1327
2022	<u> </u>	1326
2023	-	1326
2024	-	1326
2025	-	1326
2026	H	1325
2027	-	1325
_U_I		1020

Projection based on 1985 to 2004 data

0.0% growth rate
(0) vehicles/year



5% Trucks

Notes



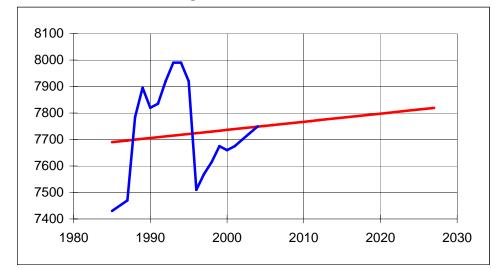
Route SR-13
Limits North of Interstate 15

Year	AADT	Forecast
1985	7,430	7690
1986	7,450	7693
1987	7,470	7696
1988	7,785	7699
1989	7,895	7702
1990	7,820	7705
1991	7,835	7709
1992	7,920	7712
1993	7,990	7715
1994	7,990	7718
1995	7,920	7721
1996	7,510	7724
1997	7,570	7727
1998	7,615	7730
1999	7,675	7733
2000	7,660	7736
2001	7,675	7739
2002	7,700	7742
2003	7,725	7745
2004	7,750	7748
2005		7752
2006	,	7755
2007		7758
2008		7761
2009		7764
2010		7767
2011		7770
2012		7773
2013		7776
2014		7779
2015		7782
2016		7785
2017		7788
2018		7791
2019		7795
2020		7798
2021		7801
2022		7804
2023		7807
2024		7810
2025		7813
2026		7816
2027		7819

Projection based on 1985 to 2004 data

0.0% growth rate

3 vehicles/year



5% Trucks

Notes



Route	I-15	
Limits	South of Elwood Interchange	

Year	AADT	Forecast
1985	9,400	8439
1986	9,490	9307
1987	9,580	10175
1988	10,840	11043
1989	12,100	11911
1990	12,435	12779
1991	13,210	13647
1992	13,675	14515
1993	14,445	15383
1994	15,705	16251
1995	17,420	17119
1996	18,545	17987
1997	19,115	18855
1998	19,830	19723
1999	21,730	20591
2000	22,685	21459
2001	23,500	22327
2002	24,455	23195
2003	23,056	24063
2004	22,479	24931
2005		25799
2006		26667
2007		27535
2008		28403
2009		29271
2010	<u> </u>	30139
2011		31007
2012		31875
2013	<u> </u>	32743
2014	<u>_</u>	33611
2015	<u>_</u>	34479
2016	<u>_</u>	35347
2017		36215
2018		37083
2019		37951
2020		38819
2021		39687
2022		40555
2023		41423
2024		42291
2025	ļ	43160
2026	ļ	44028
2027	j.	44000

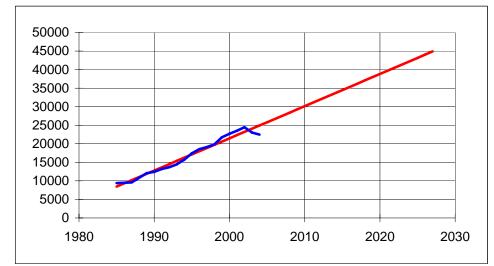
44896

2027

Projection based on 1985 to 2004 data

3.9% growth rate

868 vehicles/year



5% Trucks

Notes



Route	SR-130
Limits	North of Cedar City

Year	AADT	Forecast	
1985	1,445	1024	
1986	1,460	1277	
1987	1,475	1531	
1988	1,700	1785	
1989	1,700	2038	11% Trucks
1990	2,385	2292	
1991	2,405	2546	
1992	2,515	2799	
1993	3,145	3053	
1994	3,280	3307	
1995	3,405	3560	
1996	3,710	3814	Projection based on 1985 to 2004 data
1997	3,800	4068	5.0% growth rate —→ 254 vehicles/year
1998	5,548	4321	Olo //o g. o. n. n. n. n. o.
1999	4,375	4575	
2000	4,345	4828	14000
2001	4,375	5082	12000
2002	5,780	5336	12000
2003	5,780	5589	10000
2004	6,040	5843	
2005		6097	8000
2006		6350 6604	6000
2007		6858	
2008		7111	4000
2010		7365	2000
2010		7619	2000
2012		7872	0 +
2013		8126	1980 1990 2000 2010 2020 2030 2040
2014		8379	
2015		8633	
2016		8887	
2017		9140	
2018		9394	
2019		9648	
2020		9901	
2021		10155	
2022		10409	
2023		10662	
2024		10916	
2025		11170	
2026		11423	
2027		11677	
2028		11930	
2029		12184	
2030		12438	
2030		12400	

Notes

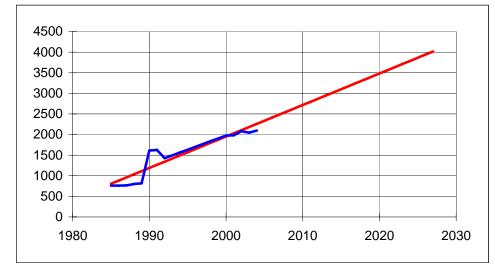


Route	SR-240
Limits	MP 0.00 to 1.22

Year	AADT	Forecast
1985	760	806
1986	760	883
1987	765	959
1988	800	1035
1989	815	1112
1990	1,610	1188
1991	1,625	1265
1992	1,425	1341
1993	1,494	1418
1994	1,563	1494
1995	1,632	1570
1996	1,701	1647
1997	1,770	1723
1998	1,839	1800
1999	1,908	1876
2000	1,977	1953
2001	1,980	2029
2002	2,080	2105
2003	2,045	2182
2004	2,095	2258
2005	<u> </u>	2335
2006	<u> </u>	2411
2007		2488
2008		2564
2009		2640
2010		2717
2011		2793
2012		2870
2013	<u>.</u>	2946
2014		3023
2015		3099
2016	<u> </u>	3175
2017]	3252
2018		3328
2019		3405
2020	<u> </u>	3481
2021	<u> </u>	3558
2022	<u> </u>	3634
2023		3710
2024		3787
2025		3863
2026		3940
2027		4016

Projection based on 1985 to 2004 data

3.8% growth rate
76 vehicles/year



5% Trucks

Notes

